

IN THE CLAIMS:

1. (Currently Amended) A wireless in-vivo information acquiring system comprising:

a body-insertable device that is inserted into a body of a patient; and
an external device that is disposed on outside of the body of the patient,

wherein

the external device includes

a power source that outputs a power-supply signal for supplying power to
the body-insertable device;

a power supply signal transmitting unit that wirelessly supplies the power
supply signal from the power source to the body-insertable device; and

a control signal superposing unit that superposes a drive control signal on
the power supply signal from the power source, the drive control signal indicating whether to
request in-vivo information, and

the body-insertable device includes

a function executing unit that executes a predetermined function to
acquire in-vivo information on the body of the patient;

a separating unit that separates the drive control signal from the power
supply signal;

a power accumulating unit that receives the power supply signal after the
separating unit separates the drive control signal;

a control signal detecting unit that detects the drive control signal
superposed on the power supply signal; and

a system controller that controls the function executing unit to execute the predetermined function while supplying power accumulated in the power accumulating unit to the function executing unit when the drive control signal indicates a request for in-vivo information, and stops supplying the power to the function executing unit when the drive control signal does not indicate the request for in-vivo information;

wherein the body-insertable device further includes a level determining unit that determines a level of power of the power supply signal transmitted from the external device to transmit a level determining signal indicating the level of power to the external device and the external device further includes a power supply level detecting unit that detects the level determining signal and a power directivity detecting unit that amplifies the power-supply signal to be transmitted to the body-insertable device, based on the level determining signal.

2. (Previously Presented) The wireless in-vivo information acquiring system according to claim 1, wherein the external device further includes a control information input unit that outputs the drive control signal upon receiving control information about controlling the function executing unit.

3-4. (Cancelled)

5. (Previously Presented) The wireless in-vivo information acquiring system according to claim 1, wherein

the power supply signal has a first frequency band,

the drive control signal has a second frequency band that is different from the first frequency band, and

the separating unit separates the power supply signal from the drive control signal by separating a signal in the first frequency band from a signal in the second frequency band.

6. (Previously Presented) The wireless in-vivo information acquiring system according to claim 1, wherein the function executing unit is a sensor that acquires in-vivo information specific to a portion to be diagnosed in the body of the patient.

7. (Original) The wireless in-vivo information acquiring system according to claim 6, wherein

the function executing unit includes an imaging unit that captures an image of the portion to be diagnosed in the body of the patient,

the control information received by the control information input unit includes information on number of frames to be captured by the imaging unit per predetermined time, and

the drive control signal output from the control information input unit includes a signal for controlling the number of frames to be captured by the imaging unit per predetermined time.

8. (Original) The wireless in-vivo information acquiring system according to claim 7, wherein

the function executing unit includes an illuminating unit that emits light to illuminate at least the portion to be diagnosed in the body of the patient,

the control information received by the control information input unit includes information on emission time of the illuminating unit, and

the drive control signal output from the control information input unit includes a signal for controlling the emission time of the illuminating unit.

9. (Cancelled)

10. (Currently Amended) A body-insertable device comprising:

a function executing unit that executes a predetermined function to acquire in-vivo information on the body of the patient;

a power-supply signal receiving unit that receives a power-supply signal wirelessly transmitted from outside as a power for driving the function executing unit, the power-supply signal including a drive control signal indicating whether to request in-vivo information, superposed thereon;

a separating unit that separates the drive control signal from the power supply signal;

a power accumulating unit that receives the power supply signal after the separating unit separates the drive control signal;

a control signal detecting unit that detects the drive control signal superposed on the power supply signal received; [[and]]

a system controller that controls the function executing unit to execute the predetermined function while supplying power accumulated in the power accumulating unit to the function executing unit when the drive control signal indicates a request for in-vivo information, and stops supplying the power to the function executing unit when the drive control signal does not indicate the request for in-vivo information; and

a level determining unit that determines a level of power supply signal to transmit a level determining signal indicating the level of power to outside.

11-12. (Cancelled)

13. (Previously Presented) The body-insertable device according to claim 10, wherein

the power supply signal has a first frequency band,

the drive control signal has a second frequency band that is different from the first frequency band, and

the separating unit separates the power supply signal from the drive control signal by separating a signal in the first frequency band from a signal in the second frequency band.

14. (Original) The body-insertable device according to claim 10, wherein the function executing unit is a sensor that acquires in-vivo information specific to a portion to be diagnosed in the body of the patient.

15. (Original) The body-insertable device according to claim 14, wherein the function executing unit includes an imaging unit that captures an image of the portion to be diagnosed in the body of the patient,

control information received by a control information input unit of an external device includes information on number of frames to be captured by the imaging unit per predetermined time, and

the drive control signal output from the control information input unit includes a signal for controlling the number of frames to be captured by the imaging unit per predetermined time.

16. (Original) The body-insertable device according to claim 15, wherein the function executing unit includes an illuminating unit that emits light to illuminate at least the portion to be diagnosed in the body of the patient, the control information includes information on emission time of the illuminating unit, and the drive control signal output from the control information input unit includes a signal for controlling the emission time of the illuminating unit.

17. (Cancelled)

18. (Previously Presented) An external device comprising:
a power source that outputs a power-supply signal for supplying power to a body-insertable device that is inserted into a body of a patient to execute a predetermined function;

a control signal superposing unit that superposes a drive control signal for controlling the predetermined function of the body-insertable device on the power supply signal from the power source, the drive control signal indicating whether to request in-vivo information;

a power supply signal transmitting unit that wirelessly supplies the power supply signal from the power source to the body-insertable device that is inserted into the body, the power-supply signal including the drive control signal superposed;

a power supply level detecting unit that detects a level determining signal transmitted from the body-insertable device, the level determining signal indicating a level of power that the body-insertable device has received through the power supply signal; and

a power directivity detecting unit that amplifies the power-supply signal to be transmitted to the body-insertable device, based on the level determining signal.

19. (Previously Presented) The external device according to claim 18, further comprising a control information input unit that outputs the drive control signal upon receiving control information about controlling a function executing unit of a body-insertable device.

20. (Original) The external device according to claim 18, wherein
the power supply signal has a first frequency band, and
the drive control signal has a second frequency band that is different from the first frequency band.

21-22. (Cancelled)

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